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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,645	10/14/2003	John Trankina	7967/83952	3212

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WELSH & KATZ, LTD  
120 S RIVERSIDE PLAZA  
22ND FLOOR  
CHICAGO, IL 60606

EXAMINER

TRAN, CHUC

ART UNIT PAPER NUMBER

2821

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/684,645

Applicant(s)

TRANKINA, JOHN

Examiner

Chuc D. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-22 is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-12 and 23-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Remarks***

This is in response to the Applicant's amendment submitted on June 3, 2005. In virtue of this amendment, claims 7 and 8 were cancelled; and thus, claims 1-6 and 9-27 are remaining active in the instant application.

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, *the "combination of the spacer elements and stiffening element forming a "Z" shaped member in claim 1, at least one stiffening element extends from near a base of the antenna tower to a height less than the height of the antenna tower in claim 6, two or three high strength stiffening members spaced equally apart on the circumference of the tower in claims 9 and 10, stiffening members is a structural element comprising one or more structural plates welded together in claim 11, and three stiffening elements having a first and a second plate section spaced apart by a third plate in claim 27" must be shown or the feature(s) canceled from the claim(s).* No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 23-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Ryan (USP. 6,694,698).

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Regarding claim 23, Ryan disclose a method of reinforcing a monopole antenna tower including the steps of:

- providing at least one structural stiffening element (32a-32f) (Col. 5, Line 14) (Fig. 3);
- providing a plurality of structural spacer elements (36a-36f) (Col. 5, Line 17 (Fig. 3);
- attaching the spacer elements (34 & 36) to the tower (10) in spaced apart configuration (Fig. 2); and
- attaching the at least one stiffening element (32) to at least two of the plurality of spacer elements (34 & 36) such that the stiffening element is in a plane parallel to the surface of the tower (10) (Fig. 1).

Regarding claim 24, Ryan disclose that the steps of providing a light-weight shell (24) (Fig. 3) having a cross-sectional shape similar to that of an antenna tower (10) (Fig. 1) and attaching the light-weight shell (24) to the structural stiffening elements (32) (Fig. 3).

Regarding claim 25, Ryan disclose that the steps of welding the plurality of structural spacer elements (34 & 36) to the tower (10) (Col. 1, line 42 and welding the at least one stiffening element (32) to at least two of the spacer elements (Fig. 2) (Col. 6, line 30).

Regarding claim 26, Ryan disclose that the steps of attaching the at least one stiffening members (32) to the shell (24) (Fig. 3).

Regarding claim 27, Ryan disclose a method of reinforcing a monopole antenna tower comprising the steps of:

providing a shell (24) having a cross-section similar to the cross section of the monopole antenna tower (10) and a diameter greater than the diameter of the antenna and a length less than the length of the antenna tower (Fig. 1);

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- providing a plurality of spacer elements (34 & 36) attached to the tower (10) (Fig. 3);
- providing three stiffening elements having a first and second plate section (42) spaced apart by a third plate (Fig. 3 & 4);
- attaching each of the stiffening elements (32), by the first plate section (42) of each to at least two of the plurality of spacer elements by welding (Fig. 3 & 4);
- attaching the shell (24) to the second plate section of the structural stiffening elements, such that the shell is attached to the antenna tower (Fig. 1 & 2).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan.

Regarding claim 1, Ryan disclose an antenna tower reinforcement, for use with an antenna tower, comprising:

- a plurality of spacer elements (36) attached to the tower (10) (Fig. 3);
- a stiffening element (32) attached to at least two of the plurality of spacer elements (36) such that the stiffening element reinforces the tower along a plane parallel to the surface of the tower (10) (Fig. 1) (Col. 5, Line 1). However, Ryan is silent on the limitation of the combination of the spacer elements and stiffening element forming a “Z” shaped member. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was

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made to modify Ryan. The ordinary artisan would have been motivated to modify Ryan in the manner described above for additional strength and resistance against deflection due to the wind forces.

Regarding claim 2, Ryan disclose that the at least one stiffening members (32) are structural steel members (Col. 5, Line 6).

Regarding claim 3, Ryan disclose that the plurality of spacer elements (36) are structural steel elements (Col. 5, Line 6).

Regarding claim 4, Ryan disclose that the plurality of spacer elements are attached to the tower by welding (Col. 1, Line 42).

Regarding claim 5, Ryan disclose that the plurality of spacer element and the at least one stiffening member are made of structural steel (Col. 5, Line 5) (Col. 2, line 48), the plurality of spacer elements (36) being welded to the tower (10) (Fig. 3) (Col. 1, line 42 and the at least one stiffening member (32) being welded to at least two of the plurality of spacer elements (36) (Fig. 3) (Col. 6, Line 30).

Regarding claim 6, Ryan disclose that the at least one stiffening element (30) extends from near a base (12) of the antenna tower to a height less than the height of the antenna tower (10) (Fig. 1).

Regarding claim 9, Ryan disclose that the three high strength stiffening members (32) spaced equally apart on the circumference of the tower (Fig. 2).

Regarding claim 10, Ryan disclose that the two or more stiffening members (30) spaced about the circumference of the tower (10) (Fig. 3).

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Regarding claim 11, Ryan disclose that the stiffening member (32) is a structural element comprising one or more structural plates (42) welded together (Fig. 2) (Col. 6, Line 30).

Regarding claim 12, Ryan disclose that one of the structural plates (42) is attached to at least one of the plurality of spacers (34) and is subsequently welded to another structural plate to form a stiffening member (Fig. 2) (Col. 6, Line 30).

***Citation of relevant Prior Art***

Prior art Cazaly (USP. 4,751,804) disclose utility pole.

Prior art Tadros et al (USP. 6,851,231) disclose precast post tensioned segmental pole system.

Prior art Payne (USP. 6,915,618) disclose tower monopole reinforcement.

Prior artBrunozzi et al (USP. 6,901,717) disclose pole reinforcing arrangement.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D. Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TC  
August 10, 2005

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', with a stylized, cursive script.

**THUY V. TRAN**  
**PRIMARY EXAMINER**